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*Indian Standard*  
SPECIFICATION FOR  
VOICE PIPE AND VOICE PIPE FITTINGS

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INDIAN STANDARDS INSTITUTION  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

Gr 3

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# Indian Standard

## SPECIFICATION FOR VOICE PIPE AND VOICE PIPE FITTINGS

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# *Indian Standard*

## SPECIFICATION FOR VOICE PIPE AND VOICE PIPE FITTINGS

### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 26 December 1966, after the draft finalized by the Marine Engineering and Shipbuilding Sectional Committee had been approved by the Mechanical Engineering Division Council.

**0.2** Voice pipe is an important means of communication between control stations on board ships. The mouth piece should be fixed at a height convenient for use.

**0.3** Notwithstanding what is stated in this standard, voice pipe and voice pipe fittings provided on board merchant navy ships shall conform to relevant statutory rules as modified from time to time and shall be subject to the approval of the Government of India.

**0.4** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

### 1. SCOPE

**1.1** This standard specifies the requirements for voice pipes and voice pipe fittings on board ships.

### 2. MATERIAL

**2.1** The voice pipes shall be made of steel tubes of light series, having a nominal bore of 32 mm, conforming to IS : 1239-1964†. The steel tubes shall be galvanized. The internal surface of the pipes shall be ground smooth, if necessary. Where the use of non-magnetic material is essential, aluminium or other suitable alternate material may be used.

**2.2** The steel sheets used for making the voice pipe fittings shall be plain sheets conforming to IS : 277-1962‡.

\*Rules for rounding off numerical values ( *revised* ).

†Specification for mild steel tubes and tubulars ( *revised* ).

‡Specification for galvanized steel sheets ( plain and corrugated ) ( *revised* ).

2.3 When the voice pipes are made of aluminium alloy, the material of the voice pipes shall conform to IS:617-1959\*, IS:737-1955† or IS:738-1956‡.

### 3. CONSTRUCTION

3.1 As far as possible voice pipes shall be straight. When bent, the radius of bend shall not be less than 5 times the nominal bore of the pipe. When branch pipes are used, the angle between the main pipe and the branches shall not be less than  $135^\circ$ , measured from the transmitting end.

3.2 Where voice pipes pass through steel decks or bulkheads (see Fig. 1), resilient mountings shall be used to reduce the effect of vibrations. Where the effect of vibrations is likely to be predominant, voice pipes shall not be rigidly connected to hull, but shall be suspended with slings lined with rubber.

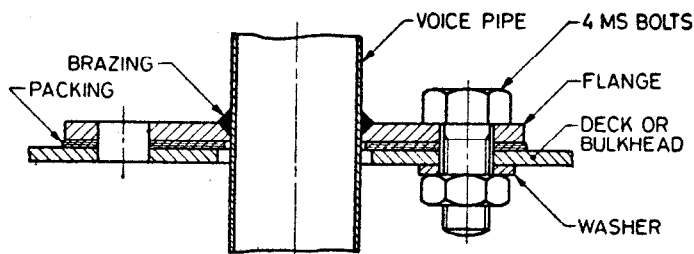


FIG. 1 VOICE PIPE — PASSAGE THROUGH DECK AND BULKHEAD

3.3 Different lengths of steel pipes shall be joined by sockets and the exposed parts shall be protected adequately against rusting.

3.4 Mouthpieces shall be attached at both ends of the voice pipe. They shall be provided with a rolled edge and shaped suitably to facilitate their use both for hearing and speaking (see Fig. 2).

3.5 On exposed decks, the voice pipes shall be suitably insulated. Hinged lids shall be provided to mouthpieces at station ends for protection against rain (see Fig. 3). The voice pipe in the vicinity of

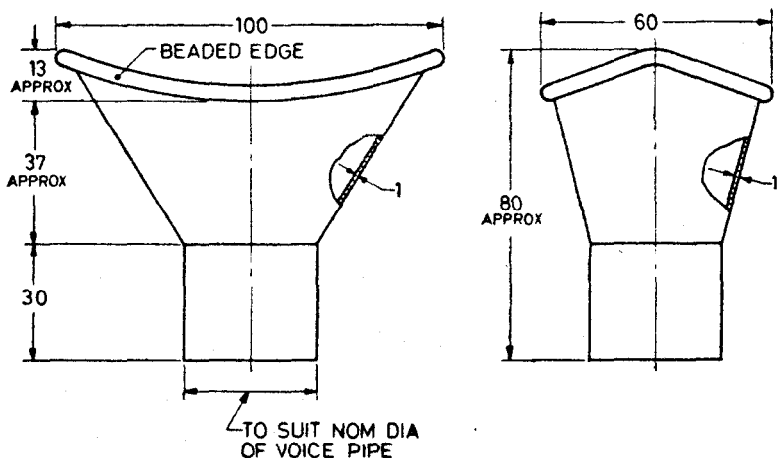
\*Specification for aluminium and aluminium alloy ingots and castings for general engineering purposes (*revised*).

†Specification for wrought aluminium and aluminium alloys, sheet and strip (for general engineering purposes).

‡Specification for wrought aluminium and aluminium alloys, tube (for general engineering purposes).



compass, although exposed to weather, shall be insulated, if required by the purchaser.



All dimensions in millimetres.

FIG. 2 DIMENSIONS FOR VOICE PIPE MOUTHPIECE

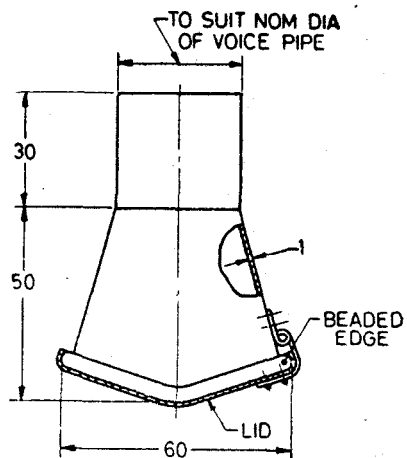
**3.5.1** If required by the purchaser, the voice pipes passing through the weather deck shall be enclosed in a water-tight trunk.

**3.6** Call bell system and whistle should be provided to draw the attention of personnel at the control station (*see* Fig. 4). In addition to the whistle, a red flap should also be provided. When the voice pipe is used, the red flap should blow upwards and remain in that position indicating which voice pipe, out of a group fixed at the control stations, is in operation (*see* Fig. 5).

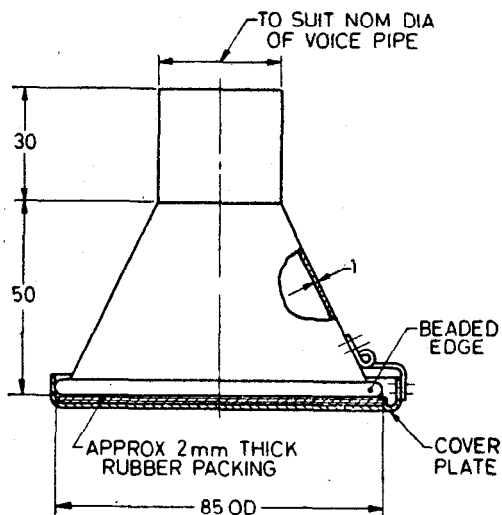
**3.7** Voice pipes should be provided with drain plugs at the lowest part of the piping, so that the condensed moisture may be removed from time to time (*see* Fig. 6).

**3.8** At the wheel house, a large trumpet-shaped mouthpiece should be fitted to the voice pipe coming from the compass bridge (*see* Fig. 7). A fine wire gauge shall be fitted just above the junction of the mouthpiece and the upper end of the pipe at all stations.

**3.9** Voice pipes and mouthpieces should be labelled on the outside of the cover, showing the position with which they communicate and the number of the voice pipes as given on the voice pipe layout drawing.



3A Mouthpiece with Hinged Lid



3B Mouthpiece with Cover

All dimensions in millimetres.

FIG. 3 DIMENSIONS FOR VOICE PIPE MOUTHPIECE

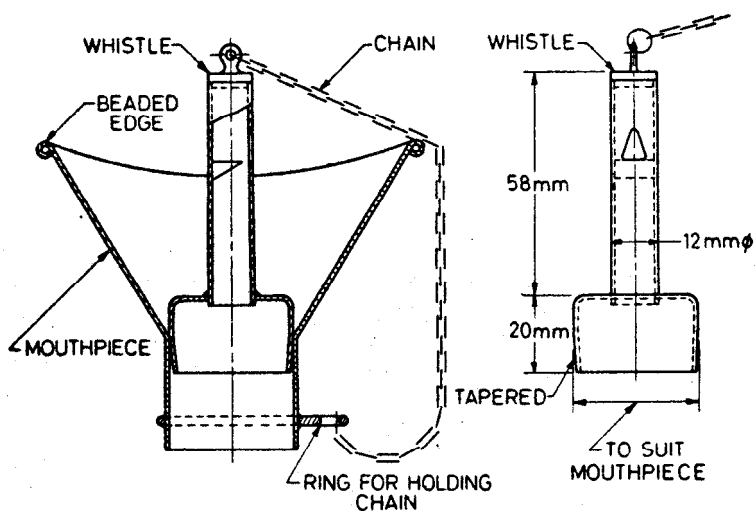


FIG. 4 VOICE PIPE MOUTHPIECE WITH WHISTLE

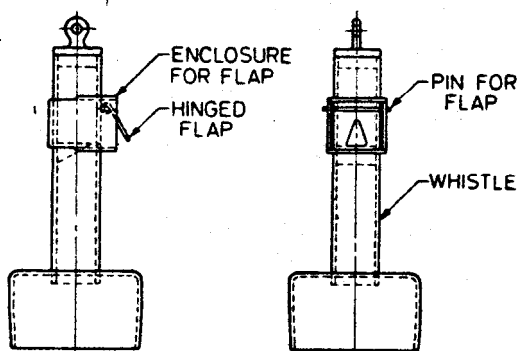


FIG. 5 VOICE PIPE WHISTLE WITH HINGED FLAP FOR SIGNALLING

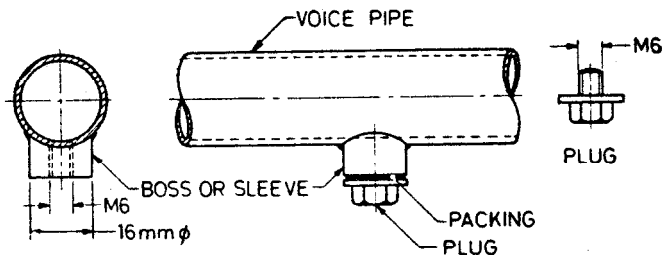
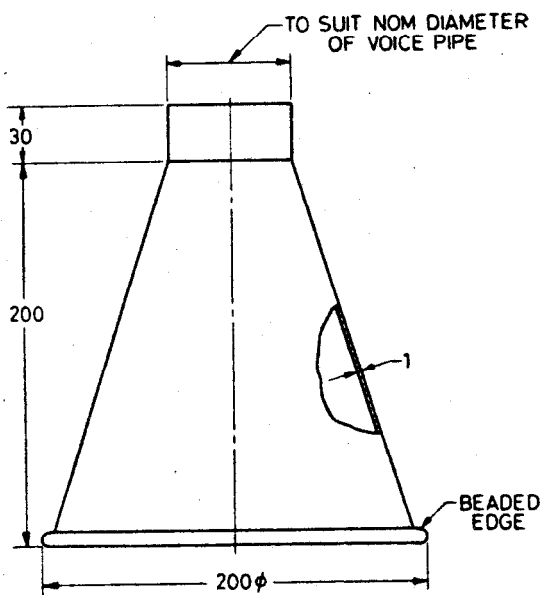


FIG. 6 DETAILS OF DRAIN PLUG ON VOICE PIPES



All dimensions in millimetres.

FIG. 7 DIMENSIONS FOR VOICE PIPE TRUMPET-SHAPED MOUTHPIECE

#### 4. DIMENSIONS

4.1 The dimensions of various voice pipe fittings shall be as given in Fig. 2, 3, 4, 6 and 7.

## 5. TOLERANCE

5.1 Tolerance on all dimensions shall conform to coarse series of IS : 2102-1962\*.

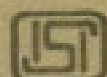
## 6. MARKING

6.1 The voice pipe and voice pipe fittings may be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

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\*Recommendations for machining deviations for dimensions without specified tolerances.



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